

### **REMARKS**

This is in response to the Office Action mailed on November 30, 2004, and the references cited therewith.

Claims 1, 15, 18, 21, and 22-30 are amended, claims 7-8 are canceled; as a result, claims 1-32 are now pending in this application.

#### **Claim Numbering Objections**

The Examiner noted a typographical error in the claim number for the original filed specification. This has been corrected with the amendments presented above. Accordingly, the claims are now properly numbered 1-32 and this objection is no longer appropriate.

#### **§101 Rejection of the Claims**

Claims 1-10, 18-20 and 27-32 were rejected under 35 USC § 101 because the claimed invention is directed to non-statutory subject matter. The Examiner asserts that the apparatus and system claims are directed to non-statutory subject matter because it is alleged that they are directed to software. Although Applicants disagree with the Examiner's conclusion and rationale on this particular subject matter, the Applicants have amended the independent claims 1, 18, and 27, such that the apparatus and systems are now "implemented in a computer-readable medium." Applicants assert that this is sufficient structure; therefore, the objections with respect to Sec. 101 should be withdrawn.

#### **§102 Rejection of the Claims**

Claims 1-15, 17-19 and 21-31 were rejected under 35 USC § 102(b) as being anticipated by Blleloch et al. (U.S. Patent No. 5,768,594). It is of course fundamental that in order to sustain an anticipation rejection that each and every element or step in the rejected claims must be taught or suggested in the cited reference.

Blleloch is directed to methods and means for *scheduling tasks* which are performed by parallel processors. *Emphasis added.* Blleloch processes parallel programs. *E.g.*, Blleloch, col. 2, lines 43-46; and FIG. 5. In Blleloch, the entire disclosure assumes that the initial program or

**IN THE DRAWINGS**

Corrected drawings are supplied herewith.

The Examiner has objected to the informal nature of the drawings. Accordingly, formal drawings are supplied herewith. Therefore, these objections should be withdrawn.

programs being processed are in fact already threaded. Blleloch is dedicated to taking a treaded program and scheduling its execution with multiple parallel processing elements.

Applicants' amended claims and canceled claims now clearly demonstrate that Applicants' invention achieves parallel processing for non-threaded programs. This cannot be achieved in Blleloch and is not taught or suggested in Blleloch, since Blleloch is directed to taking an existed threaded application and more intelligently scheduling parallel processing resources to handle that existing threaded application.

Conversely, Applicants' invention processes a non-threaded program in a parallel processing manner. This is extremely beneficial since it permits legacy programs to be integrated into parallel processing environments and process to completion more efficiently. With Blleloch this is not possible, because Blleloch even specifically mentions the types of programming languages that need to be used to develop the threaded applications and because Blleloch clearly resides entirely on the fact that the initial program is threaded. Blleloch improves the efficiency of a multiprocessor and parallel processing environment; but Blleloch does not create a parallel processing environment for non-threaded applications or programs as does Applicants' invention.

More specifically, the Examiner has interpreted the Assignment Manager (AM) (with respect to claim 7's rejection) to be a non-threaded program, since the AM is listed in column 4 lines 28-29 as performing function in ordinary sequence. But, the AM is not the program being processed by the processing elements of the Blleloch reference. The AM serves as a type of preprocessor or manager for tasks and the processing elements process the tasks. It is clear that the AM is not being processed by the processing elements, and in cases where the Examiner may allege that it is, such as at column 4 lines 26-28, the AM is clearly and unambiguously a threaded application.

Now turning to rejected claim 1, in this amended claim is now clear that the initiating program and processing programs are non-threaded and that each are processed on a separate processing element. Accordingly, it cannot be said that Blleloch anticipates Applicants' independent claim 1, since there is no teaching in Blleloch that could even remotely support non-threaded programs that are also processed by different processing elements.

With respect to the Examiner's rejection of independent claim 11, the Examiner is again trying to use the AM of Blleloch as a catchall capable of a variety of conflicting things. The AM of Blleloch is either threaded in which case it processes on processing elements or it is not threaded in which case the tasks of the initial program are what are processed on the processing elements. Neither of these two interpretations support the conclusion that Applicants claim 11 is anticipated. Thus, the rejection with respect to claim 11 should be withdrawn.

With respect to the Examiner's rejection of independent claim 15, this claim has been amended so that the AM of Blleloch cannot be said to achieve the limitations positively recited in claim 15, because if the AM is not threaded then it is not the AM that processes on the processing elements but; rather, it is the tasks associated with the initial program. Thus, the rejection of claim 15 cannot be sustained.

Turning to the Examiner's rejections of independent claims 18, 21, 22, 23, 27, and 30, these claims have been amended so that it is clear that applications, programs and/or means are non-threaded. Again, the arguments and rationale above demonstrate that the AM is not capable of achieving these limitations when it is non-threaded. This makes sense because Blleloch is directed to improving the processing environment of a multiprocessing for a threaded application. It is not directed to making a non-threaded application be capable of being processed in a parallel manner.

Accordingly, Applicants assert that the rejections with respect to claims should be withdrawn.

### §103 Rejection of the Claims

Claim 16 was rejected under 35 USC § 103(a) as being unpatentable over Blleloch in view of Shah et al. (U.S. 2002/0035556). Claim 16 is dependent from amended independent claim 15. Thus, for the amendments and reasons presented above with respect to independent claim 15, the rejection with respect to claim 16 should be withdrawn.

Claims 20 and 32 were rejected under 35 USC § 103(a) as being unpatentable over Blleloch in view of Klein (U.S. Patent No. 6,185,590). Claim 20 is dependent from amended independent claim 18 and claim 32 is dependent from amended independent claim 30.

Therefore, for the reasons and amendments presented above with respect to independent claims 18 and 30, the rejections with respect to claims 20 and 32 should be withdrawn.

Conclusion

Applicants respectfully submit that the claims are in condition for allowance, and notification to that effect is earnestly requested. The Examiner is invited to telephone Applicants' attorney at (513) 942-0224 to facilitate prosecution of this application.

If necessary, please charge any additional fees or credit overpayment to Deposit Account No. 19-0743.

Respectfully submitted,

ROBERTO GOMPERTS ET AL.

By their Representatives,

SCHWEGMAN, LUNDBERG, WOESSNER & KLUTH, P.A.

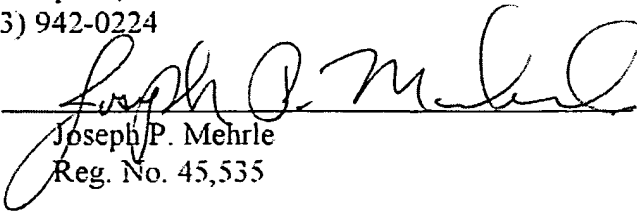
P.O. Box 2938

Minneapolis, MN 55402

(513) 942-0224

Date 2-28-05

By

  
Joseph P. Mehrle  
Reg. No. 45,535

CERTIFICATE UNDER 37 CFR 1.8: The undersigned hereby certifies that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail, in an envelope addressed to: MS Amendment, Commissioner of Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on this 28th day of February, 2005.

PATRICIA A. HULTMAN

Name

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